

1 out of that, somebody is going to come along and exploit it on  
2 a business basis because any other basis, you're all fooling  
3 yourselves, it will not happen. If they do, other people will  
4 react competitively. At a certain point you'll look at it and  
5 say, everyone is now in this enhanced basis and no one is  
6 using that old analog channel any longer, now, let's take it  
7 and offer it to someone else for some other purpose, perfectly  
8 reasonable and fine. But, if you manhandle this process too  
9 early, if you don't just basically say, in this world of  
10 unknowns, take -- this is how much bandwidth it takes, do  
11 something in it. If you use it for free, fine, take the  
12 reciprocal process, if you use it for pay, pay us as much as  
13 we can gouge out of you, and if somebody else is going to  
14 offer an advanced high definition thing, someone else is going  
15 to follow them. That's the best you can do, you can't do  
16 better than that.

17 COMMISSIONER CHONG: I have 10 more seconds and I  
18 just want to throw out one last thought, which is, as opposed  
19 to mandating HDTV, can we do something less than that and just  
20 mandate that receivers must be able to receive HDTV?

21 MR. DILLER: I don't know, it's beyond my -- I can't  
22 answer it, adopt a standard.

23 COMMISSIONER CHONG: Someone's --

24 MR. SIEGEL: Adopt a standard.

25 COMMISSIONER CHONG: Adopt a standard says Mr.

1 Siegel. Mr. Honig?

2 MR. HONIG: That would certainly be preferable  
3 considering the fact that the reason that we have public  
4 interest obligations, the reason for this panel, if you go  
5 back to the first year -- is the investment that the public  
6 has in the equipment used to receive the programming. \$1,200  
7 is a lot of money for a \$6,000-a-year family, that's their  
8 entire income. If you had a set that was subsidized in some  
9 way, they didn't have to pay for the whole thing, you wouldn't  
10 have a regressive tax where basically the poor are paying for  
11 a 40-foot picture or a 40-inch picture that maybe they don't  
12 want.

13 COMMISSIONER CHONG: I understand the set-top box  
14 could also be an option at about \$150 after time. Thank you,  
15 I think my time is up.

16 COMMISSIONER HUNDT: Mr. Diller, you wrote in the  
17 New York Times on the 4th of December the very lucid article  
18 in which you said, I quote, "The FCC should be instructed to  
19 set minimum guidelines for local educational and non-  
20 entertainment programming and to put in place a reasonable  
21 system for reviewing broadcaster performance based on these  
22 standards. If the guidelines are followed, renewal every five  
23 years should be guaranteed," unquote. You said a lot of other  
24 things as well. I thought it was a very interesting article,  
25 suppose the FCC were to follow your advice in whole or in part

1 and were to set minimum guidelines for local educational and  
2 non-entertainment programming, with respect to digital  
3 broadcast licenses, suppose we were to do that, would it be  
4 your view that we should do that at the time we grant the  
5 licenses, or should we wait until we're near the end of the  
6 renewal period and then reveal what we had kept secret the  
7 entire time and, that is, what really were the methods by  
8 which we intended to pursue the renewal process.

9 MR. DILLER: That would have a star chamber. I  
10 don't think, I mean, I think that you've got to have one  
11 omnibus set of rules for what is free broadcasting and if free  
12 broadcasting is going to be over a digital system, or over  
13 anything, then it ought to have whatever rules it had in its  
14 antique analog system. So I don't -- I think that the issue  
15 is whether or not you give an environment guidelines,  
16 percentages, intentions, however it can be sensibly done to  
17 say to people when they apply for a license, how they plan to  
18 meet this area and then hold them to account.

19 COMMISSIONER HUNDT: Whatever rules -- this is to  
20 Mr. Honig, whatever rules or guidelines or standards we decide  
21 to set with respect to digital broadcast licenses, do you  
22 agree that we should set them at the time we grant the  
23 licenses or do you think we should wait until the renewal  
24 period and then reveal what we really intended all along or  
25 then make up, at that moment, what would be the renewal

1 process?

2 MR. HONIG: It certainly inspires more confidence in  
3 regulation to have firm guidelines set first so that later  
4 you're not accused of retroactively imposing guidelines. But  
5 at the same time, sometimes conduct can be so outrageous that  
6 you might not have predicted it at the time you initially  
7 developed the rules, you should retain the flexibility to a  
8 renewal time, take action where someone's behavior shocks the  
9 conscience.

10 COMMISSIONER HUNDT: Let me speak personally for a  
11 minute, but possibly I speak for more than just myself. Take  
12 ABC, for example, I think it's a great thing that "Good  
13 Morning, America" is available for free at 7:00 everywhere in  
14 the country, we share in the news experience. It is  
15 frustrating that ABC does not have the capability to provide  
16 at the exact same time the creativity that it could give us in  
17 terms of educational TV for kids, and I don't see how the FCC  
18 would be in any way on sound grounds saying to ABC, we want  
19 you to turn off "Good Morning, America" Monday, Tuesday,  
20 Wednesday, Thursday, or Friday for half an hour and give us  
21 educational TV for kids. The constraint of the single  
22 program, but this constraint doesn't exist in the digital  
23 license. At the very minimum, it appears from every bit of  
24 testimony we've heard so far and everything in the record,  
25 that instead of 10 broadcast stations giving us 10 analog

1 programs at one time in Washington, D.C., we are going to get  
2 digitally somewhere between 20 or 30 or 40 at any given time.

3           So if that constraint is broken that had bound us so  
4 tightly for so long and frustrated everybody on all sides of  
5 the public interest bargain, doesn't it make sense for us to  
6 take this opportunity to say to the, for example, the  
7 broadcast licensees and the digital world in Washington, D.C.,  
8 we don't care how the 10 of you do this, but figure out how  
9 every single morning, Monday, Tuesday, Wednesday, Thursday,  
10 Friday, parents will have the choice of some educational TV?  
11 You have total flexibility in the market to figure out how to  
12 do it. But if you don't, as a group, figure out how to do it,  
13 all of you ought to be subject to serious question as to  
14 whether you deserve renewal. What do you think of that, Mr.  
15 Siegel?

16           MR. SIEGEL: Well, I think that comments that Mr.  
17 Diller said that we really don't know how this is going to  
18 unfold, but we do know that the Grand Alliance system does  
19 contain memory and unlike what Mr. Honig said that certain  
20 people of certain incomes may not be able to afford a  
21 computer, it is my sense that our service is going to look  
22 very much like our existing service, only with enhancements  
23 and there's going to be a large portion of that in HDTV and  
24 there's going to be enhancements of other matters going out  
25 from our transmitters to enhance that which will be of

1 educational value, of entertainment value, to the receivers.  
2 And some of those matters will go on the display of the HDTV  
3 so that the remote control of that HDTV could click on more  
4 things that may be educational inside "Good Morning, America"  
5 for the viewer. So I think that that's a distinct  
6 possibility.

7 COMMISSIONER HUNDT: But suppose the core point  
8 which is reflected in the Children's TV Act is that we want to  
9 have free over-the-air educational TV in this country, not  
10 something you have to access through a computer, not something  
11 you have to pay thousands of dollars for real fancy TV to see,  
12 is there anything wrong with saying to the 10 broadcasters who  
13 would be doing digital broadcasts in Washington, D.C., we know  
14 you're going to get 20 or 30 or 40 different programs  
15 simultaneously, you figure out how to guarantee us educational  
16 TV. Mr. Honig, last comment on this?

17 MR. HONIG: I'm going to pass that to Ms. Sohn --  
18 comment.

19 COMMISSIONER HUNDT: Ms. Sohn, he's passing it.

20 MS. SOHN: Well, I agree with you whole-heartedly.  
21 I mean, the whole premise of my testimony is, if you've got  
22 the opportunity to do more, you should do more.

23 COMMISSIONER HUNDT: Well, I appreciate the whole-  
24 heartedness, but we have run out of time. Thank you all very  
25 much for this extremely distinguished panel and we are now

1 having the lunch break and we will recommence at 1:30 sharply.

2 PANEL 3

3 COMMISSIONER HUNDT: Good afternoon. Commissioner  
4 Barrett is calling you to order, the enforcer. This is the  
5 third panel of our extremely interesting digital TV En Banc  
6 and, speaking for myself and I bet for everybody else, the  
7 first two panels have been entertaining and informational and  
8 a lot of important issues are bubbling up and getting more  
9 visibility. I think this is just terrific. Our third panel  
10 is no less distinguished, is going to be no less interesting  
11 and probably will do the right thing as soon as I stop  
12 talking. So here we go, Mr. Horowitz, you're first.

13 MR. HOROWITZ: Thank you, Mr. Chairman.

14 COMMISSIONER HUNDT: Very briefly through the rules,  
15 three minutes for each of these presentations, then the  
16 commissioners will each have six minutes, we'll have two  
17 rounds of six minutes per commissioner for questions and  
18 answers. I would like to urge you to graciously accept a  
19 certain amount of brevity in the answers because the long  
20 answers come out of the time allocated to the questioners and  
21 the questioners have a lot of different things they want to  
22 raise. So if we cut you off at all, as I had to do to Mr.  
23 Braverman before, it's only because we have so many things we  
24 want to get out on the table. Mr. Horowitz.

25 MR. HOROWITZ: Thank you, Mr. Chairman. Good

1 afternoon. As a worldwide content provider, Viacom wants to  
2 supply our products and new enhanced and expanded of our  
3 products to every possible distribution outlet, from  
4 broadcast, to cable, to telcos, MMDS, DBS, computers and the  
5 global information infrastructure. This is consistent with  
6 the American consumer's interest in having access to the  
7 widest possible range of digital offerings. Our businesses  
8 depend upon open access for all of our content, programming  
9 from Nickelodeon, Simon & Schuster, MTV, VH1, Showtime,  
10 Paramount, video games and interactive services. And digital  
11 technology is going to enable us to provide our consumers with  
12 new forms of these products.

13           So how can the Commission to make this vision of new  
14 diverse digital applications available to all consumers and  
15 all Americans? By requiring open access, open access to set-  
16 top boxes and ATV receiving equipment for all programmers  
17 while deferring to industry for the establishment of specific  
18 technical standards. The Commission must act now to prevent  
19 technological roadblocks that could be used to exclude  
20 programmers or to favor one programmer or one delivery method  
21 over another. And although ATV will be used on the --  
22 although the ATV standard that will be based on the Grand  
23 Alliance system is open, it alone does not guarantee that  
24 consumers will have access to all digital programming.  
25 Therefore, the Commission must require interoperability of



1 these set-top boxes.

2           Technological road blocks can occur in two places.  
3 The first is where programming enters the distribution  
4 pipeline and joins a multichannel package. In other words,  
5 you're in the package or you're not in a package, and second,  
6 when the programming leaves that distribution pipeline and is  
7 prepared for display. In this road block, the deployment of  
8 set-top boxes, one has to be careful to assure that they are  
9 capable of passing all signals, not a specific or certain  
10 signal, or that they can accept only a single proprietary  
11 conditional access technology or that they delay the program  
12 and deliver by it different service providers. These we need  
13 to watch out for.

14           This situation would force consumers to limit  
15 viewing choices or pay for multiple set-top boxes. It would  
16 slow the overall penetration of digital receiving equipment  
17 and it would lengthen the transition to advanced television.

18           So, in conclusion, the FCC should create safeguards  
19 against anticompetitive bottlenecks by creating rules of the  
20 open road, requiring open standards and interoperabilities.  
21 This will help insure that no barriers can be erected between  
22 the providers of the digital content and the American public.  
23 In a digital world, this flexibility is more possible than  
24 ever. Thank you.

25           COMMISSIONER HUNDT: Mr. Keyworth.

1           MR. KEYWORTH: Thank you, Mr. Chairman. I am  
2 pleased to testify today before the Commission, especially on  
3 a topic of such historic importance. It is important because  
4 it addresses one step, and a big one, in the conversion of our  
5 outmoded analog communications system to one that is digital.  
6 That conversion is essential if we are to sustain the pace of  
7 the wholesale restructuring of our economy and of our society  
8 that has been underway for more than a decade, and which has  
9 helped America regain its position as the world's most  
10 competitive producer.

11           This issue is not just about television, nor ever  
12 just about telecommunications, it is about whether we can  
13 revamp a regulatory process that was designed for another era  
14 into one that will let the computer revolution continue to  
15 thrive. We have seen, in but a decade, the once arcane  
16 computer become so pervasive that 40 percent of our homes are  
17 now equipped with at least one PC. Virtually our entire  
18 economy, both manufacturing and service sectors, is empowered  
19 by PCs. If permitted, digital television can be a part of the  
20 next step in that ongoing digital revolution which is to  
21 connect all those computers to make them even more useful.

22           In our report entitled "The Telecom Revolution, An  
23 American Opportunity," we emphasized two reforms that are  
24 particularly important in moving from today's analog  
25 regulatory environment to one that will accommodate the faster

1 pace of digital connection. The first is to eliminate  
2 regulatory barriers to new entrants. Notwithstanding the  
3 predictions of many and the debate of the early '80s over  
4 competitiveness, America's computer industry today lead the  
5 world, largely because of its new players. The success of  
6 that rejuvenated computer industry demonstrates how important  
7 new entrants are to overcoming the old habits associated with  
8 an installed base where the main frames are analog TVs. In  
9 computing those new entrants were possible because of the low  
10 barriers that characterize a largely unregulated industry. In  
11 television, more aggressive steps are necessary. The  
12 transition to digital has simply dragged on too long.

13           The second reform is the dezoning of the  
14 electromagnetic spectrum. Digital transmission in contrast to  
15 analog cannot be regulated by the nature or mode of  
16 information moved, thus, spectrum allocations need to be  
17 "dezoned," not limited to voice, video, paging, or text  
18 because digital information is inherently multi-media.  
19 Attempting to regulate the movement of digital information by  
20 its nature is tantamount to regulating automobiles by their  
21 consumption of hay or oats.

22           in accordance with these two overarching reform  
23 principles, I respectfully suggest that spectrum allocated for  
24 digital television be dezoned with complete operational  
25 freedom within the bounds of antitrust law and interference

1 considerations and with the ability to assign lease or sell  
2 that spectrum. Moreover, existing spectrum allocated for  
3 analog television should be similarly and simultaneously  
4 freed. These actions would facilitate the conversion from  
5 analog to digital service but would base the pace of that  
6 conversion on consumer demand and on new technology. They  
7 would also reduce barriers to new entrants by increasing the  
8 number of ways new players could enter the new digital  
9 markets.

10 Finally, we view auctions as the more efficient  
11 means of allocating spectrum, if used wherever there is mutual  
12 exclusivity. But I believe the American people are best  
13 served if the auctioning of spectrum for digital TV is  
14 accompanied by the simultaneous dezoning of spectrum currently  
15 allocated for analog TV. Such a regulator step, a truly  
16 digital step, is necessary if we are to let the pace of  
17 digital connection catch up to the pace of the technology that  
18 is driving it computing. Thank you.

19 COMMISSIONER HUNDT: Thank you. Mr. McKinney.

20 MR. MCKINNEY: Mr. Chairman, and Commissioners,  
21 Chairman Hundt, you were correct, indeed, in your recent  
22 speech to the IRTS in New York when you pointed out that the  
23 Grand Alliance has invented something more than just a pretty  
24 picture. Through the ATSC Digital Television Standard,  
25 broadcasters will have a level of digital flexibility to serve

1 the needs and interests of the American television public and  
2 greater so than they have ever had in the past. But, Mr.  
3 Chairman, you erred when you stated that the term "second  
4 channel," and the term "high definition" had, therefore, been  
5 made historical artifacts. Quite simply, without a second  
6 channel, digital television will not happen. Broadcasters  
7 cannot survive if they cannot serve both the old analog  
8 audience and the new digital audience during the transition.

9           When new technology becomes available in the  
10 broadcasting arena, there is always the "chicken and egg"  
11 question. In this case, will broadcasters put the new signal  
12 on the air if there are few potential viewers? And, for the  
13 equipment manufacturers, should they build digital receivers  
14 if, in fact, no broadcasters are on-the-air with digital  
15 signals? I was chief of the Mass Media Bureau when Bob  
16 Pepper's predecessor convinced the sitting Chairman at that  
17 time that it would be unnecessary to standardize AM stereo  
18 broadcasting, that the broadcast marketplace would work quite  
19 well. And so, stereo failed to be activated on most AM  
20 stations and the AM radio band today survives primarily on the  
21 backs of Rush Limbaugh and other talk show hosts. Stereo  
22 television, however, was handled differently. The FCC did  
23 standardize that and it thrived. There are few television  
24 stations today that do not broadcast their entire day in  
25 stereo or surround sound and even lower price sets today are

1 configured to decode it.

2           In a virtually unanimous filing, broadcasters  
3 support some minimum level of HDTV broadcasts. If this is  
4 implemented, all television manufacturers will build equipment  
5 that will decode all formats. You will not have to worry  
6 about the chicken-and-egg. And, Commissioners, whenever you  
7 get an entire industry sector taking the same position,  
8 something rarely achieved, you should give that great weight,  
9 it may be that they understand their mass media industry very  
10 well. And because of time limits, I'll stop now, but please  
11 know that after having spent 30 years in this business, I  
12 really offer my services to you and help I can give you during  
13 your decision process, I'll be happy to give, thank you.

14           COMMISSIONER HUNDT: Mr. Reilly.

15           MR. REILLY: Thank you. Good afternoon. I'm Ed  
16 Reilly, president of McGraw Hill Broadcasting and chairman of  
17 the Association of Maximum Service Television, the  
18 organization of television stations committed for 40 years to  
19 achieving and maintaining the highest technical quality for  
20 America's free over-the-air broadcasting system. MSTV has  
21 been a leader in every aspect of the ATV process to further  
22 one overriding goal, to assure that the public's free and  
23 universal service from local television stations can make the  
24 giant leap to a new video era.

25           The opportunity for providing HDTV and other

1 broadcast services, which the Grand Alliance system  
2 facilitates hinges on the Commission's making available  
3 transitional 6 MHz channels through a sound national  
4 assignment plan that allows broadcasters to upgrade without  
5 disenfranchising our current NTSC viewers. Without this  
6 transitional spectrum, HDTV will be available only to those  
7 with the means and inclination to pay for it. Inevitably,  
8 undermining the mass audience economic model which has  
9 sustained the public's free local and universal NTSC analog  
10 service, and upon which the successful introduction of free  
11 and universal digital television depends.

12           The market will, of course, be the best judge of the  
13 desirability of any ATV service, only if the public has a  
14 chance to view and to judge those options. That's why  
15 broadcasters are committed to programming substantial amounts  
16 of the broadcast day in HDTV. Moreover, if the Commission  
17 determines that, in addition, reasonable and practical HDTV  
18 minimums are necessary to give the service a fair market  
19 trial, we are prepared to comply.

20           While our goal is to make possible the retention of  
21 the mass programming market for HDTV services, the economic  
22 platform which supports universal free local service, we are  
23 also ready to apply the packetized capabilities of the Grand  
24 Alliance system by experimenting with the delivery of program  
25 related material. I personally believe that the system's

1 | versatility and text compatibility could allow for new,  
2 | creative, and expanded public service contributions in a  
3 | digital ATV world. We don't know today specifically what they  
4 | might be, but we do know that the opportunities will be lost  
5 | or fragmented forever if auctions are adopted, thereby biasing  
6 | the whole system towards subscription services.

7 |           Broadcasters are willing to make the necessary heavy  
8 | investments to transition the public benefits of our free,  
9 | universally available, community-based television system into  
10 | the digital era. To make that conversion, we depend on the  
11 | Commission to implement the Grand Alliance standard,  
12 | technically sound paired channel assignments, reasonable must  
13 | carry requirement, and ATV receiver standards. Thank you.

14 |           COMMISSIONER HUNDT: Thank you. Mr. Major.

15 |           MR. MAJOR: Good afternoon, Mr. Chairman and  
16 | Commissioners. I'll start with three observations.

17 |           First, in a speech before the IRTS, Chairman Hundt  
18 | said, and I'll quote, "the Grand Alliance (nurtured by the FCC  
19 | Advisory Committee) has...discovered a wondrous digital genie  
20 | in a bottle. With it you can broadcast multiple signals of  
21 | higher resolution than today's NTSC signal, or dozens of audio  
22 | signals, or software packages, or thousands of pages of text,  
23 | or a pair of very high resolution movies." In short, a world  
24 | leading, technical marvel on the order of cellular telephony  
25 | that includes within it the opportunity to create a whole new



1 industry just as cellular did in PSC will.

2           Second, as the Commission's latest Advanced  
3 Television Notice points out, today only 120 MHz of the 400  
4 MHz of spectrum allocated to TV is actually use to deliver  
5 broadcast services. In other words, the current system, 280  
6 MHz, is going largely unused.

7           Third, while we move purposely to exploit this  
8 opportunity for advanced signaling, we cannot lose sight of  
9 the obligation to provide for the needs of public safety and  
10 essential industries and we cannot lose sight of the potential  
11 for market dislocations if new services are allowed without  
12 auctions which would then compete with existing services that  
13 paid substantial sums through auctions.

14           The U.S. enjoys the best telephone system in the  
15 world and that capability has rapidly moved to the mobile  
16 environment. We should be proud of what we've accomplished.  
17 However, we're now in a new era, 40 percent of today's homes  
18 have personal computers. The internet has happened. The NII  
19 and GII are becoming a reality. The need to communicate  
20 broadband information including files, images and video with  
21 full mobility is expected to be as universal as the use of the  
22 mobile phone. The potential applications may go far beyond  
23 entertainment.

24           New applications for this underutilized spectrum and  
25 this exciting new technology are limited only by our capacity

1 to imagine and our ability to deliver a fair, market driven  
2 framework to allow it to be developed. I'll suggest a five-  
3 point plan:

4 1. Require that TV receivers shipped after some  
5 near-term date be ATV capable.

6 2. Working with all the interested parties and  
7 affected parties, accelerate finalization of the ATV channel  
8 allotment plan, associated application filing window, and  
9 construction requirements for ATV stations.

10 3. Strike a balanced approach including technical  
11 flexibility and compensation which allows ATV licenses to  
12 respond to market requirements.

13 4. Make recovery of contiguous blocks of spectrum  
14 an absolute requirement from the outset, rather than a  
15 possible option in this proceeding.

16 5. Structure allocations of recovered spectrum into  
17 segments to accommodate next generation systems which support  
18 public safety, essential industries, and general public use.

19 We do not pretend to have all the answers to this  
20 complex task. However, by using the above five-point  
21 framework, we believe the Commission can accelerate change,  
22 provide business opportunities for the broadcast and  
23 telecommunications community, and usher in an exciting era of  
24 new services for the public. Thank you.

25 COMMISSIONER HUNDT: Thank you. Mr. Carnes.

1           MR. CARNES: Thank you, Mr. Chairman. I'm proud to  
2 be here this afternoon representing the Grand Alliance. There  
3 was a lot of talk earlier today about the public interest.  
4 The Grand Alliance supports the Commission's public interest  
5 goals of preserving and promoting free over-the-air television  
6 while making the most efficient use possible of television  
7 spectrum. We believe both goals will be best served by the  
8 rapid introduction of advanced television, especially high  
9 definition television.

10           Broadcasters face a very competitive environment.  
11 Already computer displays offer higher resolution than current  
12 television. Soon, much of the video delivered to homes by  
13 cable, satellite, fiber, and tapes or discs will move to high  
14 definition. DDS is already delivering digital packetized  
15 signals to the home by satellite and is capable of delivering  
16 high definition signals today. They don't today, but once an  
17 HDTV standard is endorsed and HDTV sets are available, they  
18 likely, very probably, will.

19           If free over-the-air television service is to  
20 survive, it must remain competitive in this environment. The  
21 Grand Alliance system is broadcasters only means for avoiding  
22 technological obsolescence. It will allow them to compete on  
23 a level playing field, but only if it is implemented. To  
24 preserve free over-the-air broadcasting, the Commission must  
25 do everything possible to encourage and accelerate the

1 implementation of advanced television, especially high  
2 definition television. This suggests the following actions:

3           First, the Commission should quickly approve the  
4 advanced television standard so that the industries involved  
5 can finish designing the necessary broadcast and consumer  
6 equipment. The Grand Alliance system is the most thoroughly  
7 tested system of its kind in history. This is an outstanding,  
8 world-leading system. Waste no time in approving it.

9           Second, the Commission should encourage broadcasters  
10 to implement digital service on the transition channel as  
11 rapidly as possible. The transition channels should not be  
12 auctioned, for this would slow the process, if not destroy it.  
13 Rather, the Commission should hasten the switch to digital so  
14 that the NTSC spectrum can be vacated as quickly possible and  
15 the advanced television channels can be repacked, thus  
16 allowing the reclaimed spectrum to be organized into large  
17 contiguous, nationwide blocks. This approach would have far  
18 greater value in spectrum auctions than the alternative  
19 hatchwork of NTSC to move channels.

20           Third, the Commission should lend each broadcaster a  
21 full 6 MHz channel so that full HDTV can be delivered.

22           Fourth, and finally, the Commission should give  
23 broadcasters wide latitude in exploiting the unprecedented  
24 flexibility of the old digital system. This flexibility can  
25 allow broadcasters to play a key role in the national

1 information infrastructure and will enable them to bring new  
2 innovative services to the public which can help accelerate  
3 and pay for the conversion to digital. Thank you.

4 COMMISSIONER HUNDT: Thank you. Mr. Flaherty, and  
5 let me just note that no one has a better claim than Joe to  
6 having helped us on the many technical dimensions of this  
7 issue and I want to thank you.

8 MR. FLAHERTY: Thank you very much, Mr. Chairman.

9 COMMISSIONER HUNDT: I won't ask anyone else, I'm  
10 sure you all will agree with me in this respect.

11 MR. FLAHERTY: Thank you, sir. Commissioners, and  
12 the Chairman has noted, I was responsible for introducing HDTV  
13 in American in 1981 here in Washington at a demonstration for  
14 the FCC. Thus, I may be responsible in part for all of us  
15 being here today, and for that, I apologize. Nevertheless,  
16 I'm pleased to be here. We are on the verge of adopting a  
17 truly remarkable digital television standard that is the  
18 culmination of eight years of concentrated work by your  
19 Advisory Committee on Advanced Television Service and by a  
20 brilliant aggregation of engineers from the entities that  
21 became known as the Grand Alliance.

22 This extremely complex system carefully crafted in  
23 an open form by this nation's best scientists and engineers is  
24 the world's most advanced television system, now ready for  
25 adoption. The message from your technical community is that

1 the system has been designed, built, thoroughly tested and it  
2 provides outstanding performance now and is future proofed  
3 with head room to accommodate ongoing improvements in the  
4 future.

5           In order for over-the-air broadcasting to survive in  
6 this new environment, it will have to transition to this  
7 digital replacement service that will allow it to remain  
8 competitive with subscription-based video service providers  
9 like DBS, cable, telephone companies and so on. This will  
10 require, of course, a massive financial investment by the  
11 broadcasters as it did in the days of color, and it will  
12 require the temporary grant by the government of this second 6  
13 MHz channel in which to operate the digital television service  
14 and HDTV service in parallel with the current NTSC service  
15 during the whole transition period. At the end of this  
16 period, the broadcaster will return one channel, leaving him  
17 with the same bandwidth that he has today, but leaving a  
18 nation with a vastly improved service.

19           It's absolutely essential to provide the 6 MHz  
20 channels to enable a full range of transmission options  
21 including HDTV. Without a 6 MHz ATV channel, terrestrial  
22 broadcasters will be forever foreclosed from offering world  
23 series, for example, in HDTV, while their cable competitors  
24 would be able to offer regular season games and wide-screen  
25 HDTV for their paying subscribers. A 6 MHz channel is also

1 necessary to assure that that sufficient headroom is available  
2 in the transmission channel to allow for the quality  
3 improvements in the various aspects of the Grand Alliance  
4 system which will be developed over time.

5           So, it's time to standardize and implement the Grand  
6 Alliance system for over-the-air broadcasting and to proceed  
7 promptly to assign the temporary 6 MHz channels to existing  
8 broadcasters. Prompt action will spur the production of  
9 professional and consumer digital equipment. It will allow  
10 the U. S. to maintain its world leadership in a role digital  
11 broadcast technology, and it will assure that the vast  
12 audience of over-the-air television has the same opportunity  
13 as customers with pay services to participate in this digital  
14 revolution. In short, enable, not overregulate. Thank you.

15           COMMISSIONER HUNDT: Thank you. Commission Quello.

16           COMMISSIONER QUELLO: Okay, Mr. Flaherty, you've  
17 been involved with the development of HDTV from the very  
18 beginning, can you describe or maybe give us a review in  
19 practical layperson's terms of some of the services that  
20 broadcasters may be able to provide beyond television?

21           MR. FLAHERTY: Yes, well, that's a very important  
22 piece that is often overlooked, that the service is so  
23 flexible that in addition to television high definition or  
24 standard television services, the system develops a very large  
25 data capacity, which occurs when the encoding of the system

1 doesn't require the full data capacity available and that  
2 turns out to be a very large data capacity. In one test that  
3 was made, for example, in a one-minute commercial in high  
4 definition, full high definition, the system developed 60  
5 megabytes of data, enough to transmit six major newspapers in  
6 less than one minute. So the capacity is there, the question  
7 is, how would it be used and what business can be developed  
8 from it. But the engineers or the toolmakers only to this  
9 trade, have, in fact, provided a very large data capacity in  
10 addition to television.

11 COMMISSIONER QUELLO: Yike, great possibilities.  
12 Mr. McKinney some naysayers are concerned that a broadcaster  
13 will fight efforts to recover the 6 MHz analog at the end of  
14 the transition. Would broadcasts have any reason to keep this  
15 spectrum if they have been assigned 6 MHz of digital spectrum?  
16 What's your view on that?

17 MR. MCKINNEY: They may well want to keep it. I  
18 think that's entirely in the hands of this Commission. I have  
19 sat before this panel before when Commissioners have looked  
20 down at broadcasters and said, you will give this spectrum  
21 back. All you have to do is condition the license  
22 specifically, that the frequencies must come back, and they  
23 will come back.

24 COMMISSIONER QUELLO: Okay, I think a lot of us feel  
25 that's the way to go. Mr. Carnes, you state that an option



1 would slow the transition from analog to digital. Can you  
2 explain why a delay would be inevitable, why?

3 MR. CARNES: Well, I think the additional cost is  
4 going to slow down broadcasters from implementing digital  
5 television and I think that the most value can be gained by --  
6 right now the spectrum, as it exists, with NTSC stations  
7 scattered all around and pockets of open spectrum in different  
8 places, it's not worth a whole lot. There's a lot of  
9 interference from NTSC stations, it's not contiguous, it's not  
10 geographically contiguous. You're not going to get a whole  
11 lot of money for that spectrum. But if we can move everybody  
12 to digital as fast as possible, get the NTSC back, repack it,  
13 get big swaths of open spectrum all the way across the  
14 country, that's where you're going to get money in an auction.  
15 That's where you're going to have money to do whatever you  
16 want to do with it, and that's what we ought to be doing. So  
17 we ought to be moving to digital as fast as we possibly can  
18 and that's one of the big reason.

19 COMMISSIONER QUELLO: Okay, thank you. Okay.

20 COMMISSIONER HUNDT: Okay. Commissioner Barrett.

21 COMMISSIONER BARRETT: Thank you very much, Mr.  
22 Chairman. Mr. Horowitz, Mr. Carnes has said we ought to move  
23 to digital as fast as we can. Mr. McKinney said we should  
24 give great weight to any idea of the whole industry is in  
25 complete agreement with it, that would probably the reason I